

REMARKS/ARGUMENTS

Claims 1-25 are now pending in this application. Claims 1, 7, 14, 23 and 24 are independent claims. Claims 7, 12-14 and 20-23 have been amended.

Specification

The specification was objected to by the Patent Office as failing to provide proper antecedent basis for the claimed subject matter. The term "an electrical connection" is found on page 7, lines 5-9 of the specification, and is also illustrated in FIGS. 2A and 2B (part number 204). The antecedent basis for the plural term "electrical connections" can be found on page 3, lines 1-10 of the specification. The terms "a major plane", "major plane" and "minor plane" have been deleted from the specification, the claims and the drawings via the current amendments to the present application.

Drawings

The drawings were objected to by the Patent Office under 37 CFR 1.83(a). The term "an electrical connection" (as used in Claim 7) is found on page 7, lines 5-9 of the specification and is also illustrated in FIGS. 2A and 2B (part number 204). The plural term "electrical connections" (as used in Claim 14) has antecedent basis from page 3, lines 1-10 of the specification. FIGS. 2A and 2B have been amended to show "electrical connections" (part numbers 204 and 210). As discussed above, the terms "a major plane" (as used in Claim 7), "major plane" (as used in Claim 14) and "minor plane" (as used in Claim 14) have been eliminated from the present application via current amendments. FIGS. 2A and 2B have been amended to remove any reference to those terms. The terms "first set of contacts" and "second set of contacts" (as used in Claims 1, 6, 15, 17 and 20-22) are now better illustrated by current amendments to FIGS. 2A and 2B. In FIG. 2B, the "first set of contacts" is now shown as part numbers 206 and 208 and "the second set of contacts" is now shown as part numbers 216 and 218. The terms "third set of contacts" and "fourth set of contacts" (as used in Claim 13) are now better understood in view of the current amendments to the specification and Claim 13. The basis for the term "set of contacts" can also be found on page 3, lines 1-10 of the specification. Also, given the current amendments to

FIGS. 2A and 2B, it should now be clearly understood what is meant by the term “set of contacts”.

Claim Rejections – 35 USC § 112, 1st Paragraph

Claims 7, 13-14 and 20-24 were rejected under 35 U.S.C. § 112, 1st Paragraph as failing to comply with the written description requirement. Claim 7 has been currently amended to address the objections to the claim under this section. The term “an electrical connection” (as used in Claim 7) is described on page 7, lines 5-9, of the specification and is also illustrated in FIGS 2A and 2B (part number 204). Claim 13, along with corresponding portions of the specification, have been currently amended to better describe what is meant by the terms “third set of contacts” and “fourth set of contacts” as they are used in that claim. Current amendments to FIG. 2B also help to better illustrate what is meant by the term “set of contacts”. The original basis for the term “set of contacts” can also be found on page 3, lines 1-10 of the specification. Claim 14 has been currently amended to address the objections to the claim under this section. The term “the electrical connections” is described on page 3, lines 1-10 of the specification. Also FIGS 2A and 2B have been currently amended to better illustrate the idea of a plurality of electrical connections (Parts 204 and 210). Claims 20-23 have been currently amended to address the objections directed towards these claims and to better clarify the relationship illustrated in FIG. 3F. The elements of Claim 24 are supported by page 8, lines 25-29 of the specification and also, by FIG 4.

Claim Rejections – 35 USC § 112, 2nd Paragraph

FIGS. 2A and 2B have been currently amended to better illustrate what is meant by the terms “first set of contacts” and “second set of contacts” (as used in Claim 1). Claims 7, 13, 14 and 20 have been currently amended to address the objections to each of those claims under this section.

Claim Rejections – 35 USC § 103(a)

Claims 1-19 and 23-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gedney et al. USPN: 5,483,421 (hereinafter: Gedney). Claims 20-22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gedney et al. USPN: 5,483,421 in view of Yew et al. USPN: 6,218,202 (hereinafter: Yew).

Applicant respectfully traverses these rejections.

When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to: (A) the claimed invention must be considered as a whole; (B) the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination; (C) the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and (D) reasonable expectation of success is the standard with which obviousness is determined. *See MPEP § 2141 and Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 220 USPQ 182, 187 n.5 (Fed. Cir. 1986). Further, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Ryoka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). See also *In re Wilson*, 165 U.S.P.Q. 494 (C.C.P.A. 1970)

In rejecting independent Claim 1, the Patent Office recognized that "Gedney does not clearly teach that at least one of the first set of contacts is electrically connected to a corresponding one of the second set of contacts such that these two contacts have a non-zero y offset." (Office Action, Page 7). The Patent Office has alleged that in view of Gedney, this element of Claim 1 would be obvious to one of ordinary skill in the art. (Office Action, Page 7). An advantageous aspect of the present invention is its versatility. The present invention allows for integrated circuits and circuit boards of different configurations to be converted via electric coupling so that they may operate with one another. A key feature of the present invention is its ability to route the electrical signals in three dimensions within the converter device (the x, y and z-axes). This feature provides for great versatility and allows for the present invention to convert a much greater variety of integrated circuits/circuit boards of differing configurations for operation with one another than was previously done by analogous prior art inventions. This advantage is referenced in the specification as follows: "Additionally it should be realized that a converter board and electrical connections.... may extend beyond the boundaries of an integrated circuit, contact area of a circuit board, and the like as required by routing considerations." (Present Application, Page 7, Lines 19-22). The three-dimensional movement of the electrical connection along the x, y and z-axes within the converter is also illustrated in FIGS. 2A and 2B of the present application. This feature allows for greater flexibility in choosing the dimensions of the converter device and also

allows for integrated circuits and circuit boards with greatly varying dimensions to be operative with one another because of the more expansive routing options provided by the present invention. It is contended that if three-dimensional routing within the converter device was an obvious step in this art, it would have, given the advantages it provides, been previously addressed by the prior art and, in particular, Gedney. However, this aspect of the present invention is not taught or suggested by Gedney or any other prior art reference. Basically, Gedney does not teach the use of the above-specified element, nor does it contain any suggestion to make such a modification.

“The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.. It is impermissible to use the claimed invention as an instruction manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that “one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.” *In re Oetiker*, 977 F.2d 1443, 24 USPQ 2d 1443 (Fed. Cir. 1992) *quoting In re Fine*, 837 F.2d 1071, 1075, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988).

The Patent Office has proceeded to *impermissibly* use the present patent application as a basis for the motivation to combine or modify the prior art to arrive at the claimed invention and has failed to make a *prima facie* case of obviousness against Claim 1. Claims 7 and 14 are also believed allowable for similar reasoning as provided for Claim 1. Thus, independent Claims 1, 7, and 14 should be allowed over the prior art of record. Dependent Claims 2-6, (which depend from independent Claim 1), Dependent Claims 8-13, (which depend from independent Claim 7), and Dependent Claims 15-19, (which depend from independent Claim 14) should also be allowed.

Claims 20-22 depend upon Claim 14. Neither Gedney, nor Yew teach the element of three-dimensional routing. For similar reasoning as was discussed above for Claim 14, it is requested that Claims 20-22 also be allowed.

In rejecting independent Claim 23, the Patent Office argued that “Claim 23 recites limitations similar to Claims 7-8 and 12-13. Therefore it is rejected for the


same reasons.” (Office Action, Page 12). Using the same rationale as was used to support Claims 7-8 and 12-13 above, it is requested that Claim 23 should be allowed.

In rejecting independent Claim 24, the Patent Office argued that “Claim 24, as best understood, it recites limitations similar to Claim 14. Therefore, it is rejected for the same reasons.” (Office Action, Page 12). Using the same rationale as was used to support Claim 14 above, it is requested that Claim 24 be allowed. Dependent Claim 25 (which depends from independent Claim 24) should also be allowed.

CONCLUSION

In light of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in the case.

Respectfully submitted on behalf of
LSI Logic,

By: 
Jeffrey M. Andersen
Reg. No. 52,558

Dated: April 30, 2004

Jeffrey M. Andersen
SUITER • WEST PC LLO
14301 FNB Parkway, Suite 220
Omaha, NE 68154
(402) 496-0300 telephone
(402) 496-0333 facsimile